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'Power firms face changing landscape with RE, battery development'

Power firms face changing landscape

Development in renewable energy, batteries could alter their business performance

All of this, Hajkowicz noted, will change the way governments operate. Photo by Shahrin Yahya

BY MEENA LAKSHANA

KUALA LUMPUR: Imagine every household in Malaysia being able to generate all its electricity requirements using solar panels. Now imagine every household being able to produce more than enough power to sell to other users, essentially making a profit with their solar panels and power-storage batteries.

Where then would utility providers such as Tenaga Nasional Bhd fit in this scenario?

Commonwealth Scientific and Industrial Research Organisation principal scientist Dr Stefan Hajkowicz said the role of utility providers will change in the future, as companies like Tesla Motors pioneer home battery technology, and with cheap solar panels already present in the market.

"It could alter the business performance of the electricity generator. I think the landscape that they (electric generators) are operating in has changed a bit," he said after speaking on global mega trends at a talk organised by the Australian High Commission here in conjunction with Science Week in Australia.

"In Australia, a lot of them are really struggling. Just a small change in their market where margins were really thin was enough to make it challenging.

"The key thing is the battery — how much better and cheaper they can get. If battery technology sees a couple of big breakthroughs and really reduces costs, I think we will see a lot of houses on both solar panels and batteries, and people will buy electric cars too," he added.

However, he said there is still a long way to go for the technology before entire residential areas can go off the grid.

"It is still going to take more time for it to really work. A lot of electricity users need several batteries to be able to make it work and one battery is probably not enough," he said.

"And it is not just amperage; it is voltage too. The key thing is the battery — how much better and cheaper they get," he added.

Hajkowicz also predicted that energy mix will change, with renewable energy (RE) overtaking coal for electricity production by 2030.

By 2040, oil and coal's share in global power generation will reduce by 9%, while renewables will increase by 5%, and nuclear and gas will go up by 2%. But the world, he forecast, will consume 70% more electricity by 2040.

RE is an imperative move towards cutting down greenhouse gas emissions, in a world where climate change's impact is beginning to manifest, he said.

Climate change, he thinks, will exert greater influence moving forward, with 1.8 billion people expected to be living in countries or regions with absolute water scarcity by 2025, up from 700 million today.

With such an existing climate change scenario, he said almost half of the world's population will be living in areas of high water stress by 2030. This will affect food production as well.

These effects from climate change will increase geopolitical stress between regions as countries compete for water resources.

On the other hand, Hajkowicz said an increasingly ageing world population will see countries having to contend with rising healthcare costs.

For example, he said, Australia currently spends 25% of all government taxes on healthcare, which will increase to 40% by 2043.

In terms of growth, India, China and the Asia-Pacific will be the growth engines for the global economy by 2030, he said, while rapid development in technology and artificial intelligence could bring about a very different workforce, dominated by automation.

All of this, he noted, will change the way governments operate.

"I don't believe in the end of governments. We still need to govern ourselves. A lot of what solves this challenge in making our lives better in terms of technology is governance, [which is in] coming up with government models that really work and deliver.

"That is the primary struggle of humanity, coming up with good governance which leads to better adoption of science and technology, and progress," he added.